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CARDIAC FUNCTION AND HEART FAILURE

RECOVERY OF LEFT VENTRICULAR FUNCTION IN PATIENTS WITH ANTHRACYCLINE-INDUCED CARDIOMYOPATHY.

ACC Poster Contributions
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Authors: *Malik Tariq Rahim, Joseph Dubin, Guilherme H. Oliveira, Jean-Bernard Durand, Daniel Lenihan, MD Anderson Cancer Center, Houston, TX*

Background: The classical notion that anthracycline-induced cardiomyopathy is irreversible often limits use of higher doses of these drugs and may adversely affect survival in cancer patients. We sought to determine if aggressive medical treatment for heart failure results in improvement of left ventricular function in these patients.

Methods: We retrospectively studied 108 cancer patients consecutively admitted with congestive heart failure (HF) and decreased left ventricular ejection fraction (LVEF) following anthracyline based chemotherapy at MD Anderson Cancer Center. All patients had documented normal LVEF (>55%) either by echocardiography or MUGA prior to initiation of chemotherapy. At presentation all patients had a decrease in LVEF of greater than 10 percentage points as compared to pre-chemotherapy studies. Echocardiographic evaluation of LVEF was performed using the Method of Discs (Simpson). Follow-up echocardiograms were obtained after initiation of medical therapy for HF. Improvement of LVEF was determined as an increase of greater than 10 percentage points after initiation of medical therapy for heart failure. We collated baseline characteristics, including cancer type, cardiovascular risk factors, presenting symptoms and cardiovascular medications used in HF treatment. Student t test was used to evaluate improvement in LVEF and p value was used to determine statistical significance.

Results: In 74 (69%) patients, it was determined that HF and decreased LVEF was caused by anthracycline toxicity. 34 (31%) patients were excluded because left ventricular dysfunction was attributed to other causes including ischemia, infarction or sepsis. 47 (64%) were female, mean age was 58 (range 20-84). Mean LVEF before initiation of HF treatment was 39% (±11.5). After a mean of 11 months of therapy with beta-blocker (90%), ACE-I/ARB (68%), statins (38%), and aldosterone inhibitors(17%), mean LVEF increased to 51% (±10.8) (p=0.01) and 59% of patients had LVEF improvement.

Conclusion: Our study suggests that aggressive medical therapy for HF can result in recovery of LV function in patients with anthracycline-induced cardiomyopathy.